

WHAT IS CLAIMED IS:

1. An electro-optical apparatus, including:  
an electro-optical device having an image display region on which projection light from a light source is incident; and  
a mounting case having a plate disposed so as to face one surface of the electro-optical device, and a cover to cover the electro-optical device, the cover having a first abutting portion abutting against the plate, the mounting case accommodating the electro-optical device by holding at least a part of a peripheral region located at a circumference of the image display region of the electro-optical device with at least one of the plate and the cover,  
at least one of a heat transfer path reaching the cover from the electro-optical device through the plate and another heat transfer path reaching the cover from the electro-optical device not through the plate being formed, and  
the heat transfer path including a portion in which the electro-optical device area contacts with the plate, directly or indirectly.
2. The electro-optical apparatus according to Claim 1,  
the heat transfer path including a portion in which the electro-optical device area contacts with the cover, directly or indirectly.
3. The electro-optical apparatus according to Claim 1,  
the cover being made of a material having a higher heat conductivity than the plate, and also the electro-optical device is fixed to the plate.
4. The electro-optical apparatus to Claim 1,  
a molding material being interposed between the plate and the electro-optical device, and the heat transfer path including the molding material.
5. The electro-optical apparatus according to Claim 1,  
the plate and the electro-optical device being bonded to each other by a photo-curing resin.
6. The electro-optical apparatus according to Claim 1,  
the area-contacted portions being bonded to each other by at least one of a double coated adhesive tape and a molding material.
7. The electro-optical apparatus according to Claim 6,  
at least one of the double coated adhesive tape and molding material being made of a material whose heat conductivity is 0.6 W/m·K or more.
8. The electro-optical apparatus according to Claim 1,

the plate being made of a plate-shaped member, and including a rising portion rising toward the cover from the panel member, and having a second abutting portion abutting against at least a part of the electro-optical device, directly or indirectly, and

the area-contacted portion including the rising portion.

9. The electro-optical apparatus according to Claim 8,  
the rising portion including a bent portion having a part of the plate-shaped member which is bent.

10. The electro-optical apparatus according to Claim 9,  
the plate-shaped member including a quadrilateral portion in plan view, and  
the bent portion being formed so that a part of two facing sides among the individual sides constituting the quadrilateral shape including a portion bent into the quadrilateral portion.

11. The electro-optical apparatus according to Claim 8,  
the cover including a wall portion facing a side of the electro-optical device,  
and  
the first abutting portion including an abutting portion between the first facing surface of the rising portion and at least a part of the wall portion.

12. The electro-optical apparatus according to Claim 11,  
the second abutting portion including an abutting portion between the second facing surface as the rear surface of the first facing surface and at least a part of a side of the electro-optical device.

13. The electro-optical apparatus to Claim 8,  
the rising portion rising at a right angle from the plate-shaped portion.

14. The electro-optical apparatus according to Claim 1,  
the plate having a coefficient of linear expansion within a predetermined range when the coefficient of linear expansion of the substrate constituting the electro-optical device is a standard.

15. The electro-optical apparatus according to Claim 14,  
the predetermined range being  $\pm 5 \times 10^{-6} / ^\circ\text{C}$ .

16. The electro-optical apparatus according to Claim 14,  
the plate being made of an alloy including at least iron and nickel.

17. The electro-optical apparatus according to Claim 14,

the substrate having at least one of a pair of substrates interposing an electro-optical material and dustproof substrates provided on the pair of substrates not facing to the electro-optical material.

18. The electro-optical apparatus according to Claim 1,  
the cover including surface-area increasing portion increasing the surface area.
19. The electro-optical apparatus according to Claim 18,  
the surface area increasing portion including at least one of a fin formed so as to protrude from the surface of the cover and a dimple formed so as to form a concave portion on the cover.
20. The electro-optical apparatus according to Claim 19,  
the fins being formed to correspond to the direction of the flow of cooling air which is supplied to the electro-optical device.
21. The electro-optical apparatus according to Claim 19,  
the fins including the first column of fins and the second column of fins extending in parallel with the first column of fins, and  
a gap between the first column of fins and the second column of fins being 1 mm or more.
22. The electro-optical apparatus according to Claim 1,  
the cover including a cover main body accommodating the electro-optical device and a cooling air introducing portion extended from or added along the cover main body, and  
the cooling air introducing portion including a cooling air scattering prevention portion causing the cooling air sent toward the electro-optical device encased in the mounting case to flow to the cover main body.
23. The electro-optical apparatus according to Claim 22,  
the cooling air scattering prevention portion including a baffle plate.
24. The electro-optical apparatus according to Claim 22,  
the cooling air introducing portion including a slope portion having a pointed shape, a tip thereof opposing to the flow direction of the cooling air,  
the cooling air scattering prevention portion including the slope portion.
25. The electro-optical apparatus according to Claim 24,  
the baffle plate being formed to surround the surface constituting the slope portion.
26. The electro-optical apparatus according to Claim 1,

the cover including a cooling air introducing portion, and  
the cooling air introducing portion including a cooling air guiding portion  
causing the cooling air sent toward the electro-optical device encased in the mounting case to  
flow to the cover main body.

27. A mounting case, comprising:

a plate disposed so as to face one surface of an electro-optical device in which  
the light emitted from a light source is incident on an image display region; and

a cover to cover the electro-optical device, the cover having a first portion of  
abutting against the plate,

the mounting case accommodating the electro-optical device by holding at  
least a portion of a peripheral region located at the circumference of an image display region  
of the electro-optical device with at least one of the plate and the cover, and

at least a heat transfer path being provided from the electro-optical device to  
the cover through the plate, and

the heat transfer path including a portion in which the electro-optical device  
area contacts with the plate, directly or indirectly.

28. The mounting case according to Claim 27,

the cover being made of a material having a higher heat conductivity than the  
plate, and also the electro-optical device is fixed to the plate.

29. A projection display apparatus, comprising:

an electro-optical apparatus according to claim 1;

the light source;

an optical system to guide the projection light into the electro-optical device;

and

a projection optical system to project the light emitted from the electro-optical  
device.